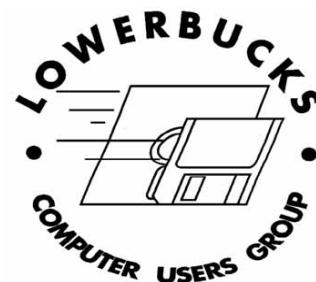# ASCIIriber

THE JOURNAL OF THE LOWER BUCKS COMPUTER USERS GROUP

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Digital Photography

The last digital SLR I purchased was a long time ago. It was relatively inexpensive and the two lenses that came with it were also at the bottom of the quality barrel.

At lot has changed in the world of digital photography in the past few years. Probably the biggest has been the shift to the mirror less design.

I decided to take the plunge and purchase a new camera and a decent set of lenses to go with it,

The camera I bought was the Olympus OMD EM-5 Mark II and I am just beginning to understand all of its capabilities.

Here are just a few nifty features I have been testing:

1. Live Time - Normally when you take a night photo you half to guess at the exposure. Too short an exposure and you have a picture that is inky black with a few pinpoints of light. Too much exposure and you have blobs of light against a dirty grey background.

   With Live Time you press the shutter and then watch the image build on the LCD screen. When you have the right amount of detail you press the shutter again .and the picture is complete.

2. High Resolution images – Although the camera has a 16 megapixel sensor, it can take 40 megapixel pictures. Essentially it takes a series of images, shifting the sensor ½ a pixel each time and then combining the information into a single image.

There's a lot more which we can talk about at the meeting.

See you on Sunday

NEXT MEETING:

SUNDAY, June 7, 2 P.M.

Whether you want to install a new operating system or keep up to date on the developments in Windows 10, the information is here thanks to Jim McGorry

- Activate Hidden Admin Account
- Burn Music Files in Windows 8
- Packet Sniffer Reveals Local Net Traffic
- RoboLinux Revealed
- Win10 Build 10074
- Win10 Build10122
- You Beam Web Video

From: The Desk of Jim McGorry

Excerpts taken from the Windows Secrets Periodical

ACTIVATE WINDOWS' HIDDEN, MASTER ADMIN ACCOUNT

Windows' user rights can be confusing and frustrating. Whether signed in with an administrator-level user account or evoking the *Run as administrator* setting, you can still run into insufficient-rights warnings.

But Windows' built-in, separate Administrator account gives you unfettered access to virtually all parts of your system setup — once you know how to access it.

Many Windows users don't know this account exists, primarily because it's usually hidden and inactive by default. Here's how to enable the "master" administrator account — and use it to streamline heavy-duty system repairs, problem-solving, and maintenance tasks in Win8, Win7, and Vista.

One master account to rule them all

Most operating systems have some sort of special-purpose *master* account: one that lets you control the OS with virtually no restrictions. This type of account has various names: "superuser," "root," "supervisor," and so forth. Windows calls it *Administrator*.

Windows' master account doesn't simply enhance a standard admin-level user account or serve as an elevated version of the *Run as administrator* option. Administrator operates much like a normal user account, except it has virtually unlimited permissions.

Once activated, Administrator (or Admin for short) is a separate account, complete with its own private desktop and user files. You can set it up with its own themes, background, and other customizations, and you can install software that's not shared with non-admin-level users.

The unfettered, full-permission access offered by the Administrator account is ideal when you need access to the deepest parts of Windows — for example, when you're trying to resolve really thorny system problems. But clearly, that level of control can also be dangerous. There's no safety net, so a misstep could royally screw up your system.

That's why Microsoft hides the Admin account by default. It's not intended for full-time, routine use — the risks are simply too great — but it's there for knowledgeable users to employ when needed.

A review of Windows' admin-level access options

As noted, Windows offers three ways to access admin-level permissions and functions. They are, from simplest to most powerful:

- **Run as administrator:** This option is typically used to temporarily access limited admin-level rights from within a non-admin-level (standard) account. In some cases, tasks that require administrator-level permissions can be run by simply right-clicking the name of an app or function and selecting the "Run as administrator" option.

  The process has a couple of speed bumps: a user account control (UAC) prompt must be acknowledged, and you must also enter an admin-level password. This two-step process can cause problems with complex and multi-step admin-level tasks. Also, depending on the account type (standard, guest, or child), some admin-level tasks are simply off-limits.

- **Assign a user account as an administrator:** Admin-level user accounts are subject to UAC controls. A warning will pop up whenever a potentially dangerous system change is about to start — for example,

when installing new software or making system-level changes that might affect other users. The task won't proceed until the user explicitly grants permission via a UAC prompt.

This one-step speed bump lets most admin-level tasks run to completion. However, some complex, multi-step tasks might fail. This can happen when a task requires several admin-level tools working in series or uses command lines or scripts. The process could stop because only the first tool or task received the necessary permissions.

▪ **Sign in as Administrator:** The master Admin account — the focus of this article — has full permissions and operates with virtually no restrictions. It has none of the restrictions or drawbacks of the first two administrator-access methods.

When you're in the Admin account, you'll likely never see a UAC prompt — any system-level task you initiate is carried out immediately. Not only is this UAC-free operation convenient, it will also let you complete complex tasks that would otherwise fail. Within an Admin account, you *can* sequentially run multiple tools and tasks without the problem of repeatedly confirming elevated privileges.

In practice, I've found that the Admin account gives the best shot at overcoming otherwise unsolvable Windows-permissions issues. Many tasks that can't be completed via an admin-level user account or the run-as-administrator option will generally work in the Admin account.

How to reveal and activate the Admin account

There are various ways to enable the Administrator account, but two are probably the simplest: an easy point-and-click process and a quick command-line entry.

(All the following instructions assume you're starting from an admin-level user account.)

Point and click

This method uses the **Local Users and Groups** feature (or plugin) in Windows' Microsoft Management Console (MMC). It's available on all but the most limited editions of Windows, such as Windows Basic and Windows Home.

Here's how to enable the Admin account via the MMC:

▪ **Win8:** From the desktop, right-click the Start icon, click **Run**, and then enter **lusrmgr.msc** (or open the Search charm and enter **lusrmgr.msc** there).

▪ **Win7/Vista:** Click Start, enter **lusrmgr.msc** into the run or search boxes, and then press Enter.

▪ In all three versions of Windows, if a UAC prompt appears, click Yes to accept the warning.

▪ With the Management Console open, click **Users** in the left pane.

▪ In the center pane, right-click **Administrator** and then select **Properties.** The Administrator Properties dialog box will appear.

▪ In Administrator Properties, under the General tab, clear (uncheck) the **Account is disabled** box (Figure 1).
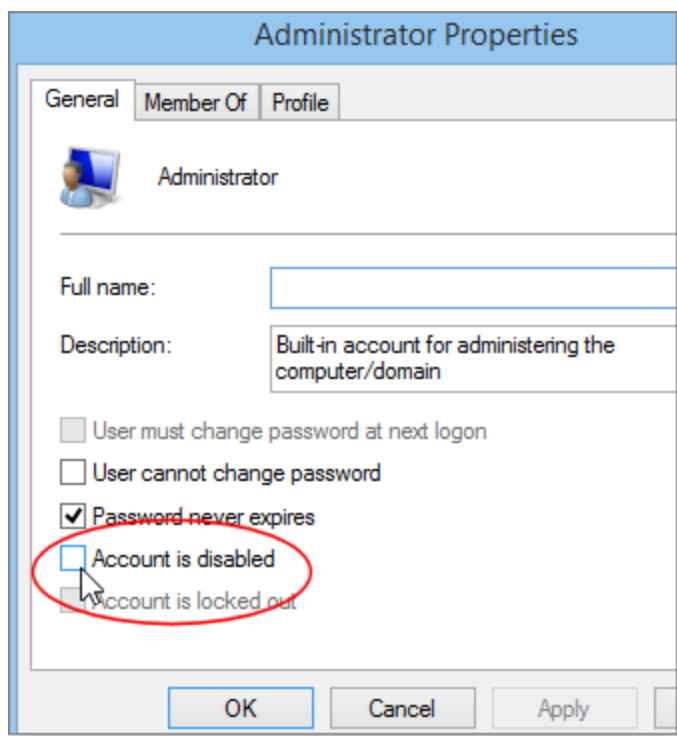
**Figure 1.** *Account is disabled* **checkbox reveals and enables the master administrator account.**

- Click OK and close the MMC.

Command line

This method works in every version and edition of Windows that I tried it on — all the way back to Vista Basic!

- Open an administrator-level (aka ***elevated privilege***) command prompt. In Win8, type **Windows key + X** and select **Command Prompt (Admin).** For older Windows versions, enter **command prompt** into the start menu search box. When it appears in the search results, right-click it and select **Run as administrator.** (For more on the command prompt, see the MS how-tos for **Win8**, **Win7**, and **Vista**.)

- Type or copy/paste the following command (also shown in Figure 2), which reveals and enables the Administrator account.

  net user administrator /active:yes
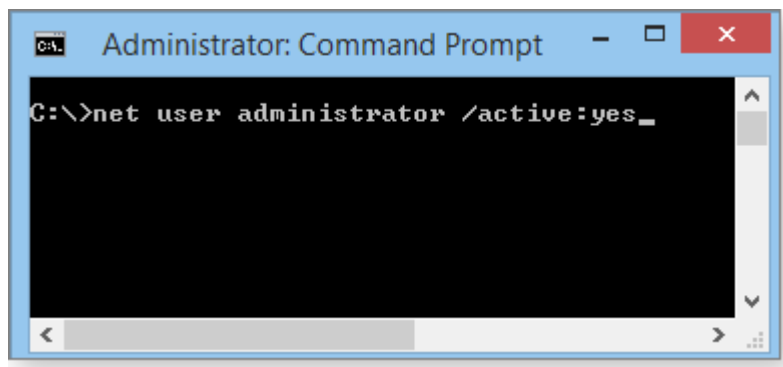
Figure 2. Activating the Administrator account in an admin-level command window

- Press Enter and then close the command Window.

Accessing the Administrator account

Once you've enabled the Administrator account via either of the preceding methods, reboot your system, sign out of your currently open account (or select Windows' **Switch user** option) — the Admin-account icon should

now appear on your sign-in screen. (For more info, see the MS FAQ item, "How can I switch to a different user account?" for **Win8**, **Win7**, and **Vista**.)

Figure 3 shows the Administrator account added to a Win7 sign-in screen. Win8 and Vista look somewhat different, of course, but work the same way. To access Administrator, you simply click its icon, just as you would any admin- or standard-user account.

Figure 3. Once activated, the master Administrator account appears as a normal sign-in option (Win7 shown).

The first time you access the new Admin account, Windows will take some time to set it up. Again, Administrator has its own desktop, user files, and settings, so Windows needs to create a new user folder (**C:\Users\Administrator**) with the standard subfolders: Contacts, Desktop, Documents, Downloads, and so forth. Fortunately, the setup is a one-time event; once completed, accessing the Administrator's account will take no more time than accessing any other account.

Important: When the Administrator account is first set up, there's no password for it. But this fully privileged account is, obviously, too dangerous to leave unguarded. So once Windows completes the setup process and you have full access, your first task should be to establish a really secure password.

You can use the normal method: click **Control Panel/User Accounts/User Accounts** and use the appropriate prompts/links that let you add or change a password. You can also change the sign-in picture and so on.

Checking whether the Administrator account works

It's easy to verify that your new Admin account is fully privileged. Simply put, with a properly working Admin account, you should almost never see a UAC warning.

To test this, simply begin any task that would normally trigger a UAC prompt. For example, the full Management Console normally requires a UAC confirmation to launch from a typical user account. But once you're in Administrator, simply entering **mmc** into the Windows search or run box will take you straight to the Management Console — with no intervening UAC speed bump.

Similarly, any command window you open within Administrator automatically includes admin-level rights — no further steps are needed to *elevate* the command windows' privileges.

You're now free to perform virtually any system-level task, with no worries about having the right permission levels and without UAC interference.

Remember: When you're running as Administrator, you're working without a figurative safety net — there'll be no warnings to remind you that you're about to undertake potentially dangerous actions. So before making any significant system changes with the Admin account, carefully think through any actions you're about to perform — and always, always, always make sure you have full, current, working backups. (Please don't send me an email stating that you tried Administrator, severely damaged your system, and have no backup to restore!)

When you're finished with a task that required the use of the Admin account, sign off (or reboot) and then sign back in to your normal user account. (Another reminder: Many, if not most, standalone Windows users run continuously on an admin-level user account, which can make it easier for malware to take full control of the system. It's safer to use a standard user account for your day-to-day computing activities.)

How to put Administrator back in the closet

Again, for security's sake, you should use the Admin account only when you really need it. When you disable and hide the account, its icon will no longer appear on the sign-in screen. Think of it as removing temptation.

Fortunately, the steps for putting Administrator away are nearly identical to those you use to enable it. There are, again, two simple methods; perform either from your regular user account.

Point-and-click: Follow the same steps described above to access the Administrator properties via the MMC. But now, simply tick the **Account is disabled** box (Figure 4); then click **OK** and exit the console.
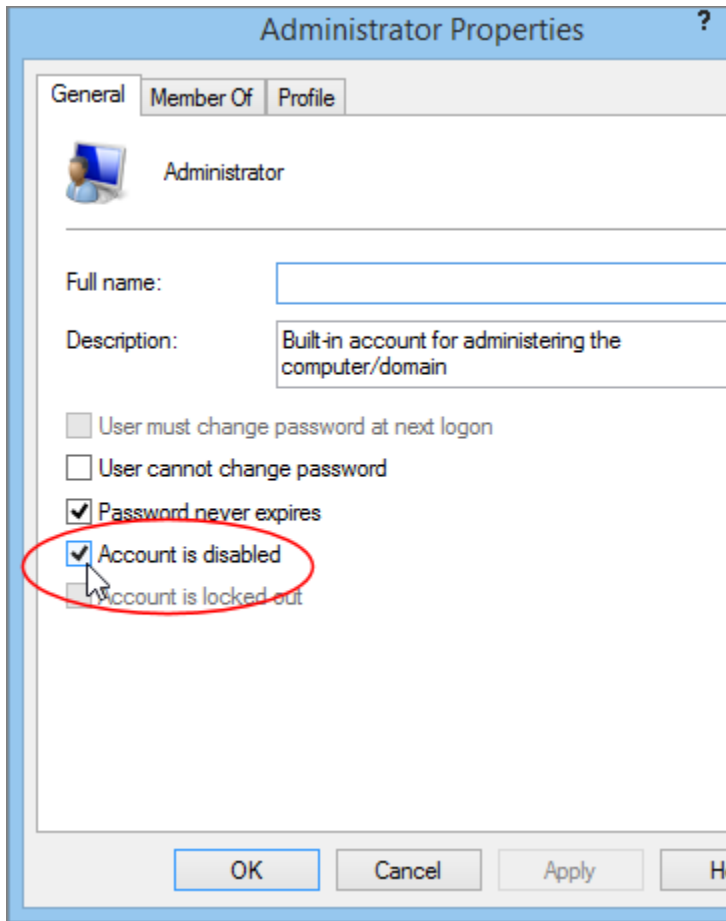
Figure 4. One click quickly disables and hides the Administrator account.

Command-line: Open an admin-level command prompt and then type or copy/paste the following command (shown in Figure 5).

net user administrator /active:no
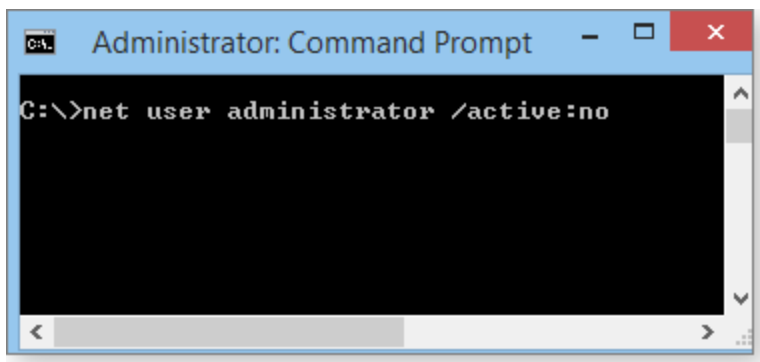
Figure 5. Disabling the master Administrator account via a command-line window

Press Enter and close the command window.

Whichever method you use, it's really just that simple!

Automate the enable/disable-Admin process

If you think you might need to pop in and out of Administrator regularly, you can save yourself some time by automating the command-line method.

In your normal user account, type or copy/paste the *enabling* command (**net user administrator /active:yes**) into Notepad. Click File/Save As and navigate to the location where you want to keep the file. In the *Save as type* drop-down menu, select the All Files option. Give the file an obvious name and assign it a **.bat** extension instead of **.txt.** For example, you might call the enabling file **EnableAdminAcct.bat** (see Figure 6).
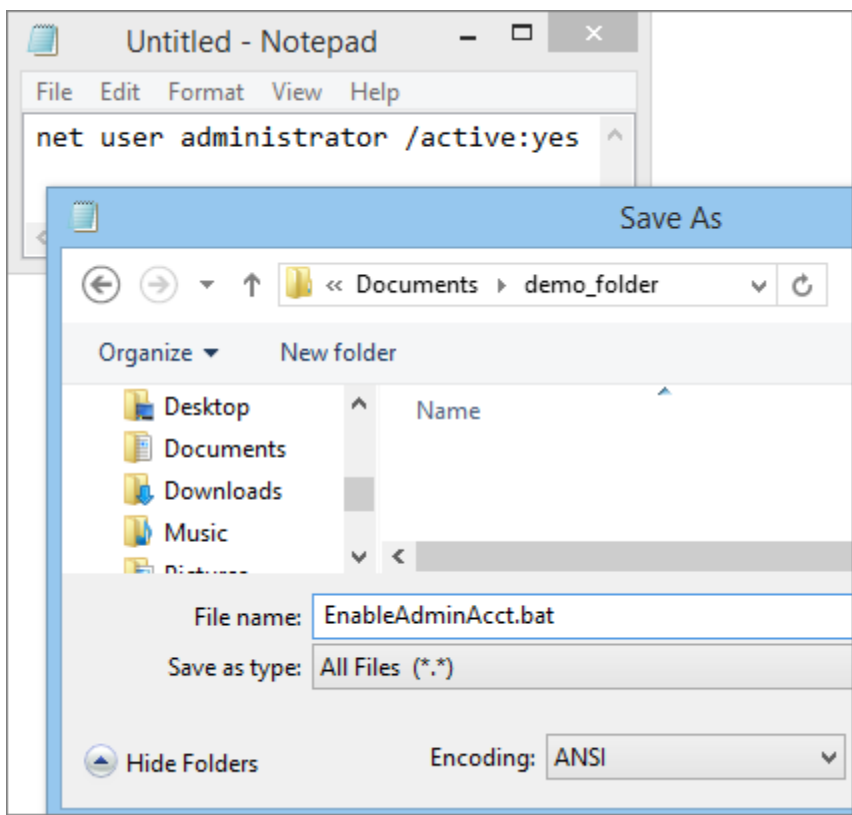
Figure 6. Creating command files makes it easy to enable/disable the Administrator account.

Now click **New** in Notepad and do the same thing for the matching *disabling* command (**net user administrator /active:no**). Once again, click File/Save As, select All Files, give this file an equally obvious name, and assign it a **.bat** extension (for example, **DisableAdminAcct.bat**).

When you want to enable or disable the Administrator account, right-click on the appropriate **.bat** file and select **Run as administrator.** Accept any UAC warnings that appear; a command window will flash on the screen as the command executes — and then vanish.

You can then reboot, sign off, or use the **Switch user** command: the Admin account's icon will be either present or absent on the sign-in screen — depending on whether you ran the enable or disable command.

Ultimate power requires ultimate caution

Once again, the Administrator account is hidden by default for a *very good* reason: it can be dangerous if misused. In fact, an MS TechNet **page** suggests that Administrator is aimed at IT-level activities such as operating-system deployment and software auditing.

But with care, caution, and good backups, the master admin-level account can be used for complex repair and maintenance tasks as well as to resolve stubborn permissions problems that "Run as administrator" or an admin-level user account simply can't handle.

Weekly Download Section

from Jim McGorry

BURN MUSIC FILES IN WINDOWS 8

Betty Lou from WV sent in a question after having issues with burning music CDs in Windows 8, wondering why her disc would play in a computer but not on a separate CD player.

The most likely issue to cause that particular problem is that the music files were burned as a data disc, rather than as an audio disc. What's the difference? A data disc acts like a hard drive, USB flash drive, floppy disc etc. – it's a collection of data you can view or transfer. While you can open your burned MP3 or WMA files with music playing software on your computer, they won't typically play on any other device, like a CD player, game console, or discman (for those of you who remember a time before the almighty MP3 player).

An audio disc on the other hand actually formats the files specifically for play back on audio devices. Due to this formatting process, audio discs can't hold as large a volume of music files, but they can play through equipment like your car stereo. To burn an audio CD you need to use a program other than the built-in Windows CD burning tool that you might normally use (pictured below).
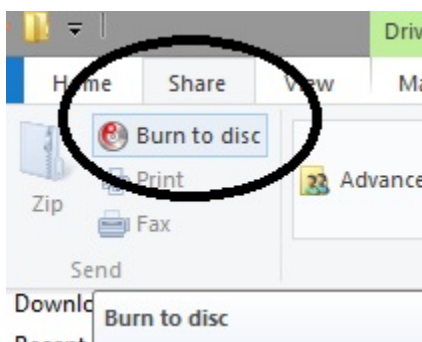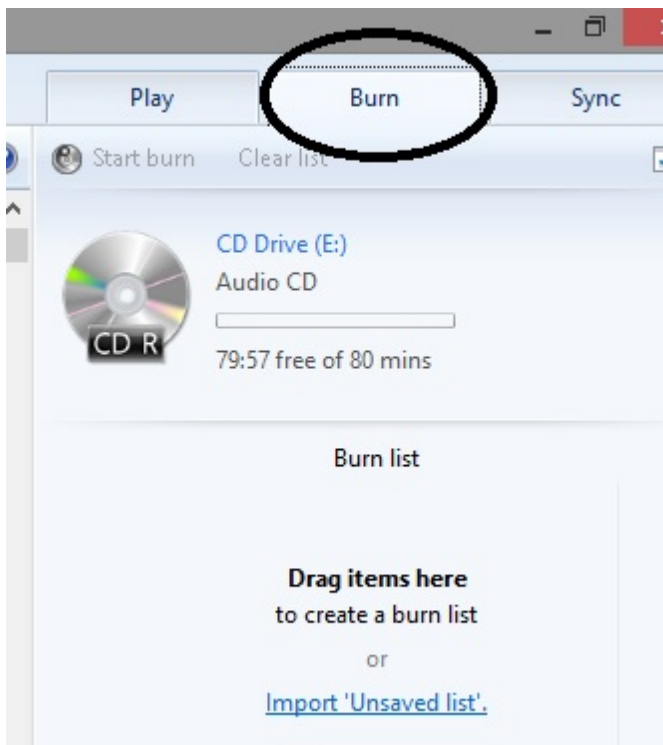

Thankfully, Windows 8 already comes with a separate program that makes audio CD burning a snap – Windows Media Player.
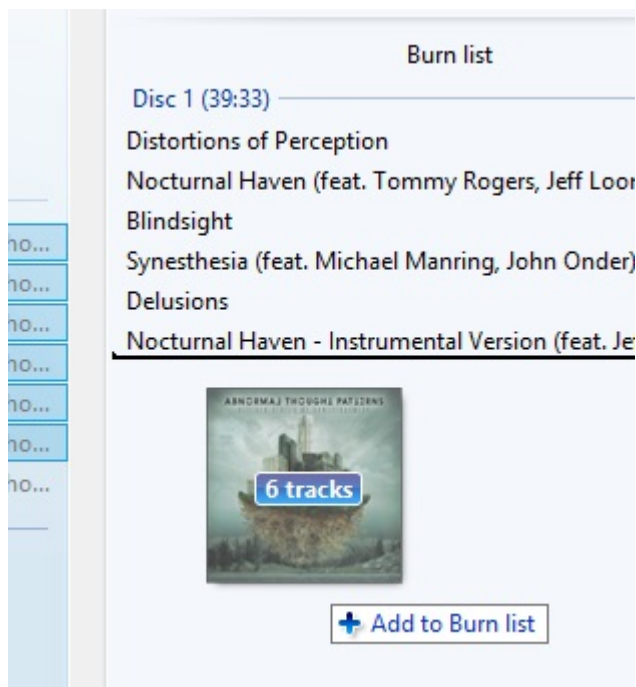
After putting in your blank CD-R, navigate to the "Burn" tab at the top-right end of the program. If you already have a playlist saved you can simply import it by clicking the button.


Otherwise you simply need to click and drag the specific audio files you want to burn over to the panel on the right side, at which point the pointer will display the message "Add To Burn List."

Alternatively, you can right-click the name of an album if you don't want to drag and drop each individual song and click "Add To" and then "Burn List."
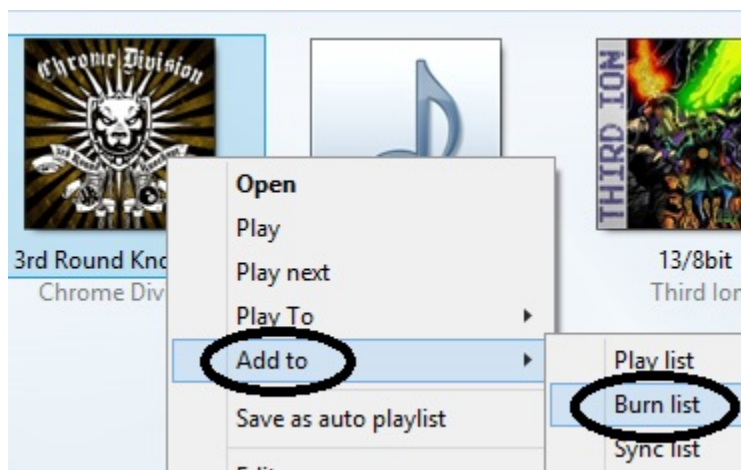
Click the "Start Burn" button underneath the "Play" tab to burn your files as an audio disc.
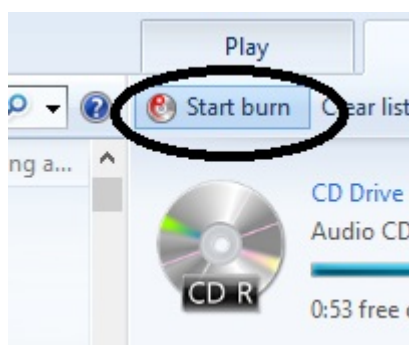
If for some reason you don't have Windows Media Player on your computer, you can easily download any number of free **audio CD burning tools right here**.

From: The Desk of Jim McGorry

Excerpts taken from the Windows Secrets Periodical

HOW A PACKET SNIFFER REVEALS LOCAL NET TRAFFIC

How often have you looked at an ostensibly idle PC's flashing drive-access light and wondered: "What's my computer doing?"

Some of that activity is internal, but much of it also involves external devices and services. Here's how to get a peek at that otherwise hidden network chatter.

An introduction to sniffing data packets

Before I get into details, you should know that this article is merely an introduction to the process of examining network TCP/IP packets. Thoroughly covering this topic requires considerably more space than will fit into a Windows Secrets issue.

Fortunately, there's a plethora of books, self-study courses, and in-person training sessions — as well as certifications — for the tools I discuss below. For example, the Wireshark tool has an entire training process built around it. Wireshark University (**site**) is led by Laura Chappell and Gerald Combs. I've attended some of Laura's classes, and she's an excellent instructor.

Examining the packets of data that go between your machine and another system is daunting — but it also provides a fascinating glimpse into what your computer is doing. There are numerous tools for analyzing data packets. Along with **Wireshark** (formerly Ethereal), some of the more popular packet-sniffing tools include Microsoft's **Message Analyzer** and RSA NetWitness Investigator, offered on the EMC site.

For space and simplicity, I'm limiting this discussion to Wireshark — it's the best-known of the three, and it's relatively easy to install.

Note: As always when adding new software — especially applications that poke deep into Windows — make a full backup of your system. Packet analyzers typically install a small app called WinPcap (Windows Packet Capture; **more info**) for *listening in* on your network connections. A backup is always good insurance, should something go awry with an installation or other system changes.

Before installing Wireshark, you might also want to review a few Wireshark videos to get a feel for how it works. At least start with the "Introduction to Wireshark" **video**.

Note: A warning about Wireshark and similar packet sniffers. We assume you're using these products on networks you own or have specific permission to analyze. It's not just bad form to collect someone else's data, it's likely to be illegal.

Getting started with Wireshark packet capturing

Once you have Wireshark (**download page**) installed, you can start packet sniffing by selecting an active network connection and then clicking the Start button (see Figure 1).

Figure 1. Before clicking Wireshark's start button, you must select a network connection.

Be prepared for a fire hose of information on local network traffic — or, more precisely, on network packets, as shown in Figure 2. (It helps to keep in mind that data sent and received by a device is broken into "packets." For more on this fundamental building block of digital communications, see the related Wikipedia **page**.)

Figure 2. Wireshark's main window displays a daunting amount of packet information.

When I started learning Wireshark, I'd typically start data collection, count to ten, and then stop the session by clicking the bright red box in Wireshark's toolbar. That way, I'd be working with a manageable amount of information. Trying to watch a live session is generally pointless — our systems are always way too "chatty."

Once you've collected a bit of data, scroll back to the top and see whether there are any interesting captures. (Note: With Win8, the Packet List view might be too small and not resizable. Click View in the Wireshark toolbar and uncheck Packet Details and Packet Bytes.) I have a home-based peer-to-peer network, so Wireshark shows packets from a server that's poking around the net, requesting information.

To sort through some of the collected packet data, it helps to know the IP addresses for the key systems on your network. (Keep in mind that this use of Wireshark is collecting information on packets traveling across the local network *connection* — those sent and received by the PC running Wireshark.)

For the IP address of the system you're examining, open a command window and type **ipconfig /all** at the prompt. Hit Enter. In the resulting list, look for **IPv4 Address** in the **Ethernet adapter** section. In my case it's **192.168.1.27** (see Figure 3), but it could also be something such as **10.0.0.19.** Scroll down a little farther and look for **Default Gateway** and **DHCP server,** the addresses for your local router. In my case, they're **192.168.1.1.**

(Note: Your router's management menus can also provide IP-address information on devices on the local net. It might be under a heading similar to "Connected devices.")

Figure 3. Windows' *IPConfig* **will display the IP address for both the PC and the connected router.**

Back in Wireshark, the Packet List has IP source and destination columns. When your PC connects to a site on the Web, the packets sent are listed in the Source column. The Destination column tells you where the packets are going. If the destination IP address isn't a local device, you find out who owns it by Googling "whois" followed by the IP address — or use your favorite whois tool.

For example, a sample capture (Figure 4) shows that I'm sending to and receiving from IP address 216.52.233.173, which I suspect is my LogMeIn connection. Looking that address up in **ipdb.at** confirms that 216.52.233.173 is indeed LogMeIn (Figure 5).

Figure 4. Wireshark shows a connection with an outside location.

Figure 5. I used *ipdb.at* to find the owner of a connected IP address.

You can also use Wireshark to determine whether your email clients are securely transmitting your username and messages. With Wireshark running, launch your email client and check for new mail. In my example, I've purposely disabled the client's SSL settings and connected to the mail server using an unsecure connection. I'm using an IMAP-based email account hosted by GoDaddy.

After checking for new mail, I stop the Wireshark logging session and start my search for the related packets. To make the search easier, I can click Edit/Find Packet and enter "imap" into the Filter box. Sure enough, scrolling down the list, I find that my computer connected to the email server and started exchanging data. (I could have also clicked Wireshark's Protocol column to re-sort the list and then scrolled down to the "IMAP" listings.)

Typically, you'll see various "hello" strings, as the client software sets up a connection to the server. In my test of an unsecure exchange, I can see my username and password, captured by Wireshark in plain text (Figure 6). This is just how a hacker might steal your username and password while you're sitting at the local coffee shop — except the packets are traveling over Wi-Fi. It demonstrates why it's so important to ensure that you have SSL enabled for your Internet authentications.

Figure 6. With SSL disabled, Wireshark shows that my email sign-in name (redacted in this screenshot) was sent in plain text.

With SSL turned on, I'm unable to see my credentials in the Wireshark capture — nor would anyone else be able to. Figure 7 shows that the IMAP client set up an encrypted-handshake session. Because I'm using Thunderbird, my email client also connected with the Mozilla website.

Figure 7. Wireshark shows an encrypted handshake with my email server, plus a connection with Mozilla and unreadable credentials and content.

When I scroll farther down the list, I can see my workstation communicating with GoDaddy's IMAP server and starting a server-key exchange. Also, unlike the non-SSL connection, I can no longer read the content of my messages in the Wireshark captures.

Reviewing the TCP/IP traffic on my system, I didn't see anything that I would consider abnormal. I noted that the backup server on my network contacted the PC periodically — a normal process of checking in. I also saw that my workstation would periodically check Network Time Protocol servers (**site**) to ensure it had the correct time. There were various system events — all normal — such as checking for system and anti-malware updates plus other maintenance tasks.

Setting the baseline for what's 'normal'

Tools such as Wireshark have their troubleshooting limitations. For example, they don't make it easy to distinguish normal network traffic from something malicious. Often it comes down to monitoring your system and developing a feel for what's normal and what's not.

Here's a case in point. The other day, one of my workstations started misbehaving. It was slow and constantly popped up "Please wait" messages. Eventually, my Outlook client wouldn't open — I couldn't even sign in to the account to review settings.

I launched Wireshark to see whether there was any malicious traffic, but there was nothing that would explain the problem. So I started poking around file locations and realized that the **.ost** file (**more info**) in my Exchange email setup had ballooned to a massive size — and was grinding my entire system to a halt.

I renamed the **.ost** file and then reopened Outlook so it could rebuild the file (something you can do with Exchange or Office 365 but not with a POP or IMAP setup using the **.pst** file format). With that done, my workstation was back to its normal self.

The upshot? Troubleshooting tools such as Wireshark, Autoruns (WS **story**), Process Explorer (WS **story**), and other utilities won't tell you specifically what ails your PC. But they will help narrow down possible causes. It's typically up to you to determine what's "abnormal" on your system.

Weekly Download Section

from Jim McGorry

ROBOLINUX REVEALED: A LINUX A WINDOWS USERS CAN LOVE

We get a lot of questions about Linux-based systems. There's a seemingly endless number of versions (known as distros or flavors). Linda is curious about Robolinux. She writes:

What is the purpose of Robolinux? Just wondering if I need to familiarize myself with it.

Robolinux is a robust user-friendly Linux distribution oriented towards Windows users who want to migrate to the open source Linux platform. Just like other Linux distributions, Robolinux is virus free, customizable, secure, configures most hardware components automatically (so you won't have to worry about installing drivers for WiFi, printers, e.t.c) and features a user-friendly interface. Robolinux installs everything you need to get started including Video, Wifi & Printer drivers and all current updates within minutes. It provides access to over 30,0000 free software packages that can be installed with a single mouse click.
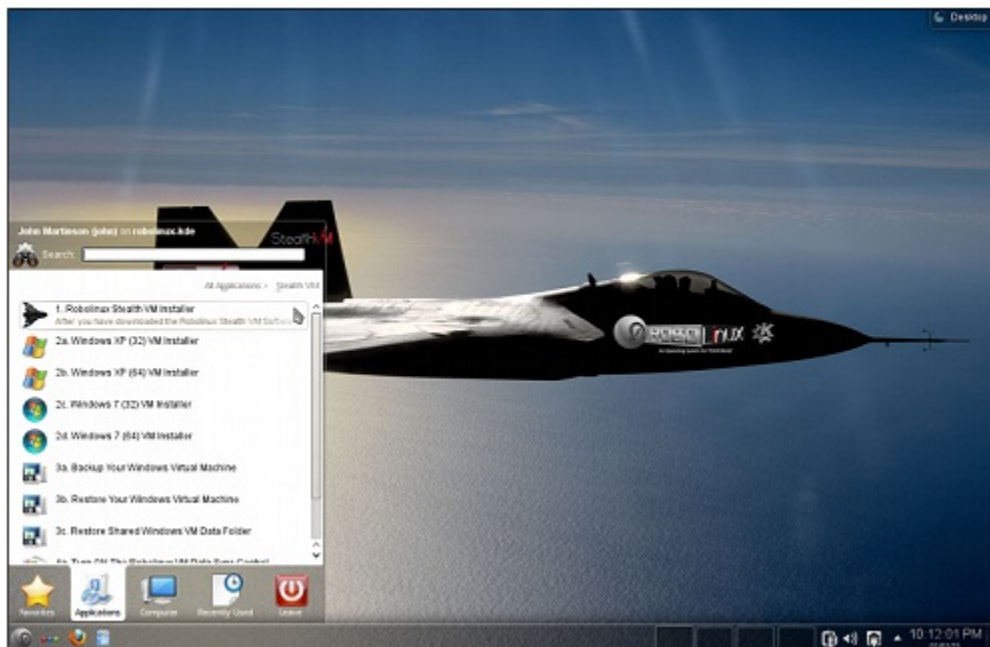
A key feature includes the ability to run Windows XP or 7 inside Robolinux, simply by downloading the **Robolinux Stealth VM Software** and using it to clone your Windows C: Drive. This means that you will be able to use the applications you have been using in Windows, inside Robolinux, and also keep the same data. So you wont have to give anything up in the migration from Windows to Robolinux.

Another good thing about the Robolinux Stealth VM Software is that while it was developed by Robolinux maker John Martinson for use on Robolinux, its support now extends to other Linux distributions like Ubuntu, Linux Mint, OpenSUSE, Fedora, Debian, and 500 other distributions. So you can use the tool with your preferred Linux distribution.

It should be noted that although RoboLinux is open source software and essentially free, the developer asks for a donation of $19.95 for the Robolinux Stealth VM Software, which is the software package that allows you to clone your Windows drive.

If you are migrating from Windows, you will find the transition to Robolinux smooth in that, setting up is easy, you have access to a wide variety of applications and you won't be forced to give up your Windows applications as you can run them on Robolinux.

You can find out more about Robolinux on its **official website**, where you'll also find the download link. For more on the cloning process of the Windows C: Drive, you can **watch this video to see the cloning in action**. You can skip to about 11 minutes in to see the walkthrough if you don't want all the background information on the project.

From: The Desk of Jim McGorry

Excerpts taken from the Windows Secrets Periodical

WIN10 BUILD 10074: WHAT'S NEW, WHAT'S UNKNOWN

With the recent release of build 10074, Windows 10 Technical Preview should be nearing the feature-complete phase. But while there's lots to see in the latest build, there's also much that's still unknown.

Here's a look at what's new, what's been killed, what's likely, and what's still obscure.

Win10 Preview is starting to look like a product

If you've been staying up to date with the Windows Insider program, you should now be on build 10074. Microsoft brought everybody up to that level — either through Win10's built-in **Update & recovery** tool or via ISO downloads — late last week. (Note: In most cases, the next build will appear only when all Win10 updates are applied.)

In broad strokes, this new build looks a lot like build 10041, which I talked about in the March 26 **Top Story**. But under the covers there's a whole lotta shakin' goin' on.

The Start menu retains its now-familiar layout (Figure 1), with a Win7-like list of programs on the left and fancy live tiles on the right. Win8 users should recognize the tiles as Metro-style programs, but Vista and Win7 users will probably feel more comfortable thinking of them as glorified Windows gadgets.
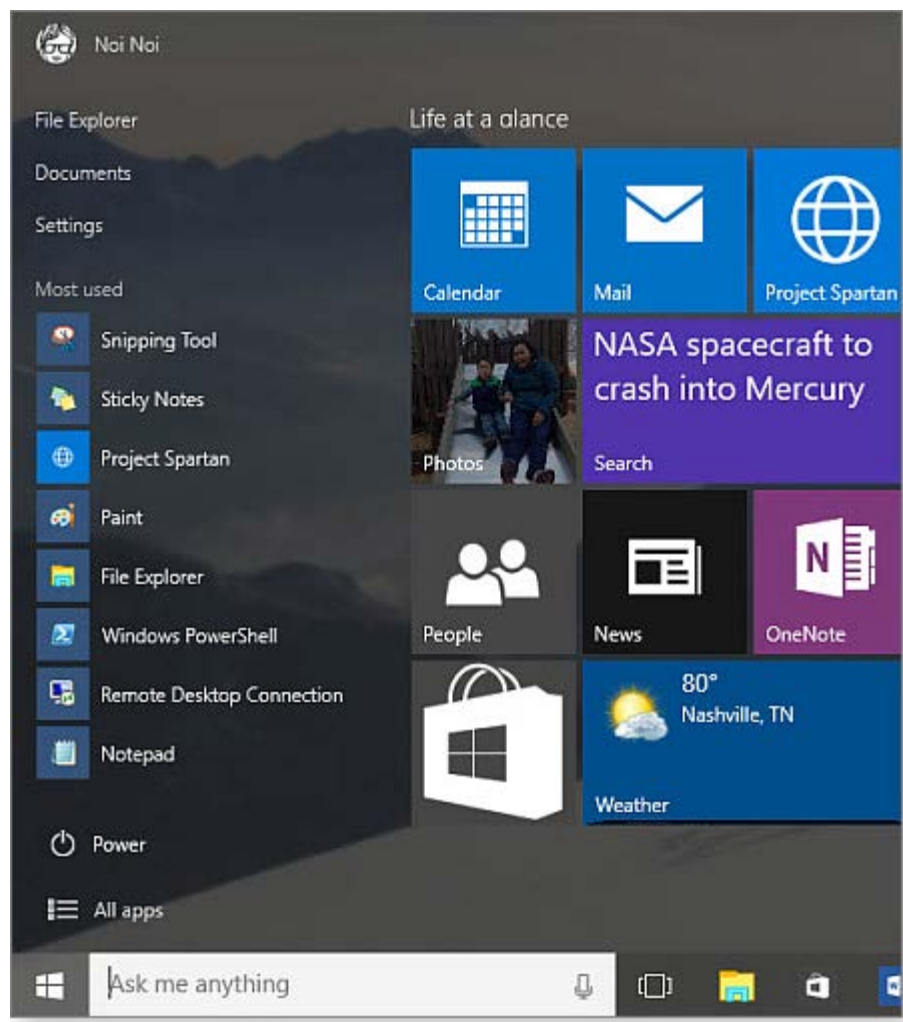
Figure 1. Win10 build 10074's Start menu looks relatively complete.

Microsoft is testing two see-through "glass" versions of the Start menu. Figure 1 shows the "blurry" form, which I greatly prefer. Although we won't get Aero Glass back (dang!), it looks like the final versions of the Start menu, taskbar, and maybe the window borders will get some transparency.

Looking through the offered icons, you'll note that the new Web browser is still labeled "Project Spartan." But at last week's Build conference, Microsoft announced that the IE replacement will be called "Microsoft Edge" (note: not *Windows* Edge). It'll be the default browser in Windows 10. You'll still be able to use IE 11 if you like, but it'll be buried in the All apps/Windows apps list.

I've spent a lot of time working with Microsoft Edge (see Figure 2), and I have to admit that I like it. At this point, it can't match the features, settings, and add-ons of Chrome or Firefox, but it's fast and light. More important, it has correctly rendered all the webpages I've thrown down its maw.
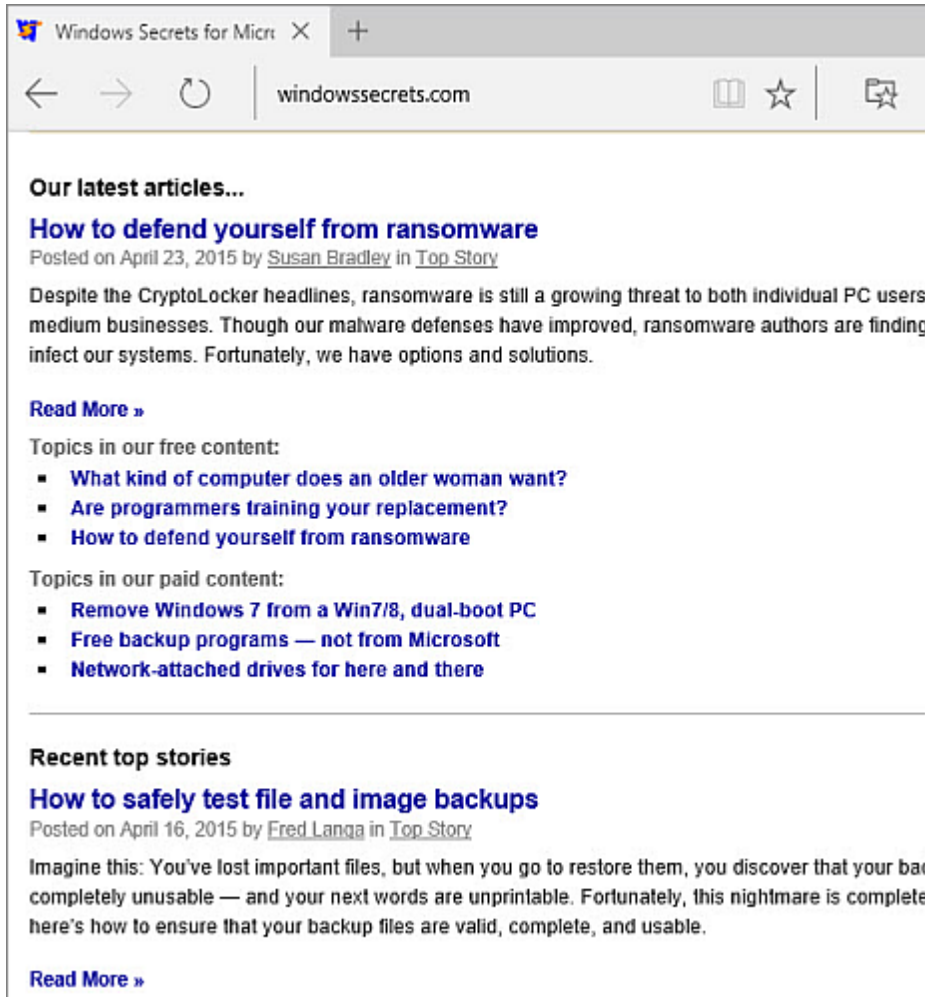
Figure 2. Win10's new browser, code-named *Project Spartan,* will henceforth be called *Microsoft Edge*.

Since Microsoft Edge is a ***Windows*** (formerly Universal, formerly Modern, formerly Metro) app (as opposed to ***Windows desktop*** app), it should look and run more or less the same on desktops, laptops, tablets, the Xbox, and even Windows 10 phones. My conjecture — completely unsupported by fact — is that Microsoft chose the name "Microsoft Edge" because they intend to transport the browser to Android, iOS, and possibly OS X.

Moving along: Cortana, Microsoft's answer to Siri and Google Now for voice-activated assistance, has improved a bit in this latest build — though the changes are mostly cosmetic.

Tablet mode, shown in Figure 3, has stirred up some discussion. Apparently, some fans of the Metro side of Windows 8.1 aren't pleased with the way Win10's tablet interface is shaking out, according to **posts** in the Microsoft Community Windows Insider Program forum and various other online sites.
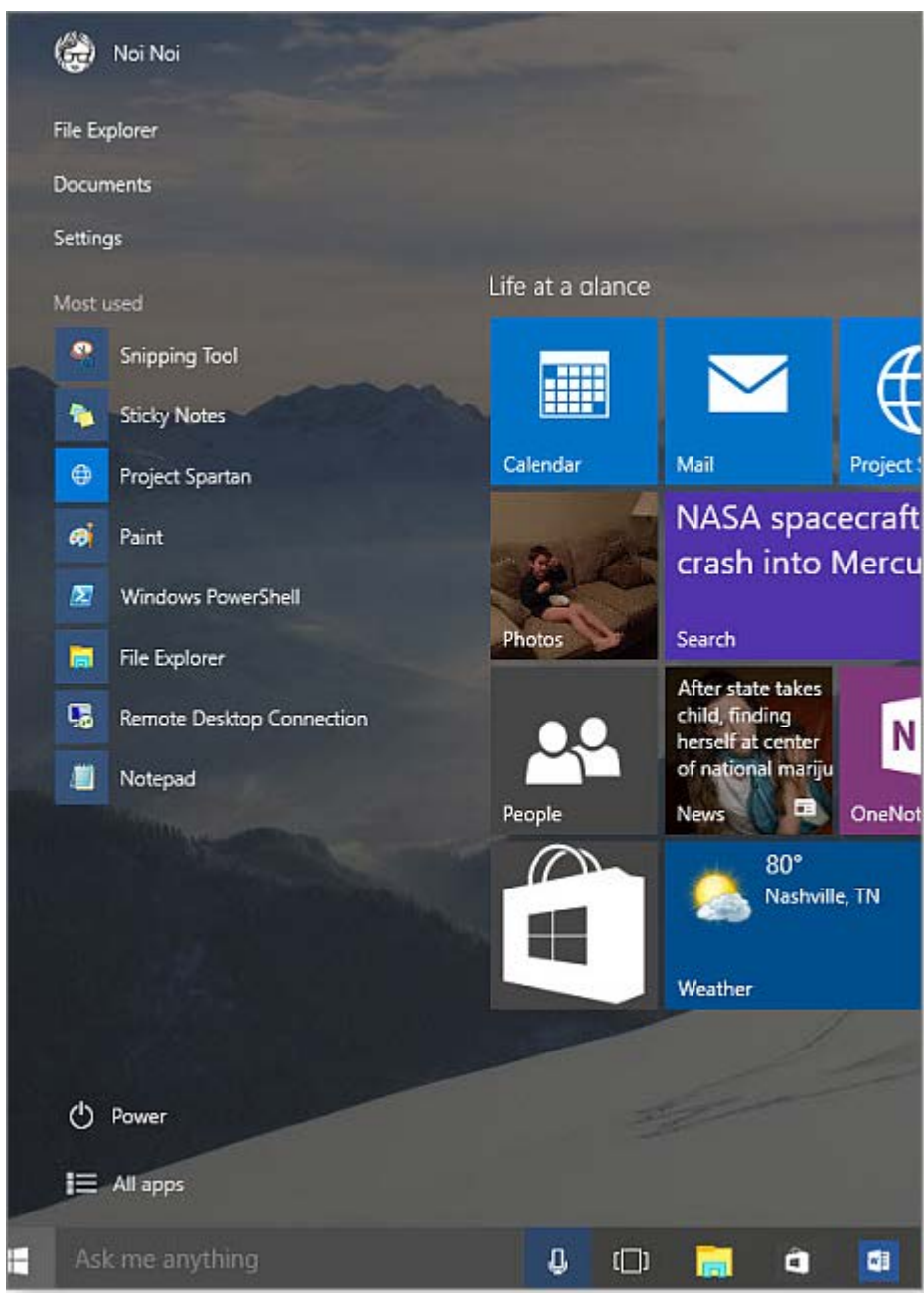
Figure 3. Win10 Preview's Tablet mode has become surprisingly controversial.

If you look carefully at Figures 1 and 3, you'll see that Tablet mode shifts the tiles and enlarges them slightly, adding more space between the text entries on the left. Not so obviously, the taskbar continues to show up in Tablet mode — whether you want it or not — as do title bars for separate windows. Both these features represent significant changes from Windows 8.1. The Metro happy-tappers want more room for their pinkies.

The new Mail and Calendar apps are surprisingly good. They still don't have all the features of online rivals such as Google Mail and Outlook.com, but they're light-years ahead of any free Windows mail or calendar clients we've ever seen before — going all the way back to Windows 3.1.

There are other, smaller changes in build 10074. For example, you can have an unlimited number of separate desktops. Also, the Notification Center (aka Action Center), which pulls out from the right like the now-deceased Charms bar, has improved a bit; some notifications are *hot* and clickable. Moreover, more Windows settings have migrated from the Control Panel to the Settings app.

Microsoft released new and improved Music and Video apps after build 10074 hit the streets. You can download them from the "Store (Beta)" gray tile. I'm not impressed with either media app, but maybe I'm asking too much.

Most important, build 10074 is remarkably stable — at least in my experience.

Build announcements hint at what's to come

While Win10 seems to be coming together quickly, there are numerous other parts that are just vestiges or are still missing. For example, the contacts app, People, looks incomplete. Moreover, the Albums tool in the Photos app doesn't seem to work, and OneDrive has been pared back, prompting complaints from various testers about the loss of "smart files" (**more info**).

Though repeatedly pressed at last week's Build conference, Microsoft wouldn't divulge any specifics on Win10's delivery date. At this point, all we know is "this summer" from Redmond and "late July," according to AMD CEO Lisa Su's offhand comment.

On the other hand, the Build keynote speech showed off a raft — no, a fleet — of new products that are still in the development stage. The keynote was a three-hour ordeal for conference attendees, but you can see a nine-minute version that hits all the high points on The Verge **website**.

Windows honcho Terry Myerson predicted that within two to three years, a ***billion*** people will be running on Windows 10 (helped, no doubt, by Microsoft's reported plan to upgrade Windows 7, 8, and 8.1 for free). Rumor has it — still unconfirmed — that anyone currently in the Windows Insider program will be able to continue in the program, getting all the latest updates, even if they didn't own a "genuine" copy of Windows.

We've known for some time that Microsoft is building its Universal Windows Platform (UWP; **more info**), which lets developers create apps that run on the Win10 desktop, tablets, Windows 10 Phone, and even Xbox. But as revealed at Build, Microsoft also plans to make migrating Android and iOS apps to UWP — and from there to Windows 10 — easy for developers.

Reportedly, there's even a project that will let app developers wrap up Web-based applications (HTML, JS, etc.) and stick them into the UWP. Microsoft is also building a bridge to migrate classic Windows programs — the ones you and I currently use every day — to the new universal platform. If successful, it means that Photoshop, Quicken, and any other program you might want to mention could, at least in theory, become Windows (Universal/Metro) apps, running in their own sandbox-protected environment inside Windows 10.

Of course, the devil's in the details. We've heard all this before with Win8 releases, but this time the people building the bridges appear to know what they're doing and have the backing to make it work — maybe.

At Build, Microsoft prestidigitator Joe Belfiore gave an amazing demo: he showed how a Windows 10 phone could act as the brain for an entire computer system, with keyboard and mouse attached by Bluetooth and a big monitor connected with some other technology. In five or 10 years, you might be able to take your phone to a different office, a different building, or a different planet — where you simply plug it in and start working just as if you were at home.

Brian Livingston, who founded the Windows Secrets newsletter, once gave a talk that predicted precisely that capability. That was 10 years ago; it astounds me that someone is now actually demonstrating the technology.

Microsoft also showed off a new Win10 feature called **Spotlight;** it's supposed to help you find new Windows features that you might otherwise overlook. (No, this isn't the return of the dreaded Clippy — **info**.) What Microsoft didn't mention is that the technology might be used to attempt to sell you things. (Cough, cough.) It appears to be an option that's enabled by default.

Finally, the much-discussed HoloLens (**more info**), which combines virtual and actual reality, apparently suffers from an unexpected limitation: the field of view for the goggles is very small. So instead of walking into a VR-augmented room, you'll be looking at a VR-augmented section of your desk. Still, it's early days.

Microsoft gives Windows Media Center the boot

With its roots going back to Windows XP, Microsoft's digital-video recording/playing app, Windows Media Center (WMC), has had a long and particularly erratic history. It's one of those programs many users either loved or hated, and few are using it now. Perhaps the writing was on the wall when Microsoft failed to release a version for Windows RT. Still, it was unexpected — and for some, unwelcome — news that WMC won't survive the jump to Windows 10.

In a May 4 **tweet**, Microsoft's Gabriel Aul confirmed that WMC will not be included with Win10 due to "decreased usage." If you really want to keep this recorder/player, you'll have to stick with Win7 or possibly add it to Win8.1 (**more info**). Microsoft's preference might be that you buy an Xbox device. Or just rent a DVR from your cable/satellite company.

Peering into a (somewhat) dark crystal ball

Chief among the things we don't know about Windows 10 is how it'll be updated after its official release. We now know that businesses — those who pay for Windows 10 — will have an option to defer updates (as they can now), using a feature called Windows Update for Businesses. But there's been no information on how Microsoft will release security patches for you, me, and the rest of the non-paying world.

Microsoft has made references to "Windows as a service" — a term I don't like because it could be confused with "software as a service," which typically means *renting* your software.

"Windows as a service" might mean that Microsoft rolls out updates almost continuously. New features for Windows would be released as soon as they're ready — no more service packs, no more versioning (such as Win8.1). New versions of Windows (Universal) apps might install automatically, presumably on all platforms. And because much of Windows 10 is, in fact, made up of Windows apps, the OS itself could change rapidly.

Those rapid changes could blur the point at which beta Win10 becomes final code. We might never hear that Windows has hit its official "release to manufacturing." (Hardware manufacturers will, of course, need some sort of "release" code to test and deploy on their new systems.)

Given that squishy definition of "RTM," I suspect that AMD's Lisa Su was on the money — I think Microsoft plans to formally release Windows 10 in late July. That means those in the Insiders program will get it shortly afterward, with a more general rollout in early August. We should see new machines with Win10 logos later in August.

Given the many pieces that still need to fall into place, you probably think July is way too soon — and I'd have a hard time arguing with you. On the other hand, the jump from Win8 to Win 10 isn't as wide as, say, from Vista to Win7 or Win7 to Win8. And if the new OS ends up being a, uh, "service," there'll be no need for a final, fully finished product.

This is the new Windows. It'll be interesting to see how it plays out.

From: The Desk of Jim McGorry

Excerpts taken from the Windows Secrets Periodical

WIN10 BUILD 10122: TWO STEPS FORWARD, ONE BACK

May's Win10 build 10122 release is a bit shaky, but many of its new features are coming into sharper focus.

Improvements include a more functional Edge browser, a cleaner start menu, a much-improved Tablet Mode — and even the return of an optional Win7-style backup/restore.

To start, a note on installing May's build. As of this writing, build 10122 is currently unavailable as an ISO download. If you haven't installed Win10 Preview or if you want a completely clean setup, you'll first have to go to the Windows 10 Insider Preview page and download the ISO for April's build 10074. You must then go to Settings/Update & Security/Advanced options and select the **Fast** option. If you then select **Check for updates,** you'll find build 10122, which comes from the **fbl_impressive** branch ("FBL" = "Feature Branch Level").

Also, be sure all updates for build 10074 are installed before upgrading to May's build 10122. Oh, and don't be in a rush to start testing the latest build — the download-and-install process can take an hour or so, especially if you're running Win10 on a virtual machine.

Problems for systems using AMD graphics

Build 10074 is clearly showing some development pains as the operating system approaches its formal release date, reportedly sometime around late July. In fact, this might be the most unstable build we've seen, based on reports from some users who are well acquainted with Win10.

My problems with build 10074 centered on my test system's AMD graphics cards. I had a horrendous experience — until I installed a May 22 AMD-driver update. If your Win10 test system uses AMD graphics (either on the main chip or on a video card), be sure to immediately open Win10's Windows Update and the drivers, along with all other pending patches. If you're not in a hurry, you can leave the system running overnight — and the updates should be installed automatically.

Be sure to read Windows mahaguru Gabe Aul's official **announcement** for a quick overview of the changes in build 10122. You should also read the "known issues" section at the bottom of the post. It mentions the problem with AMD graphics and also notes that the upgrade to this build fails with an "error 0x80070057 — 0x20007" message.

Aul's Twitter **feed** should be another stop if you're having difficulty with build 10122. For example, his May 22 tweet notes the release of the AMD drivers. He also mentions a fix for failed build 10122 installs on Surface Pro 3s. In a command window, run the following:

rundll32.exe pnpclean.dll,RunDLL_PnpClean /DRIVERS /MAXCLEAN

Changes to Start, Edge, system backup, and more

If you've been following my series of articles on Win10's unfolding, you know that the new OS's defining feature is the reconsidered **start menu,** which combines Win7-like elements on the left and Win8/Metro-like elements on the right. You can see part of the new Start in Figure 1.
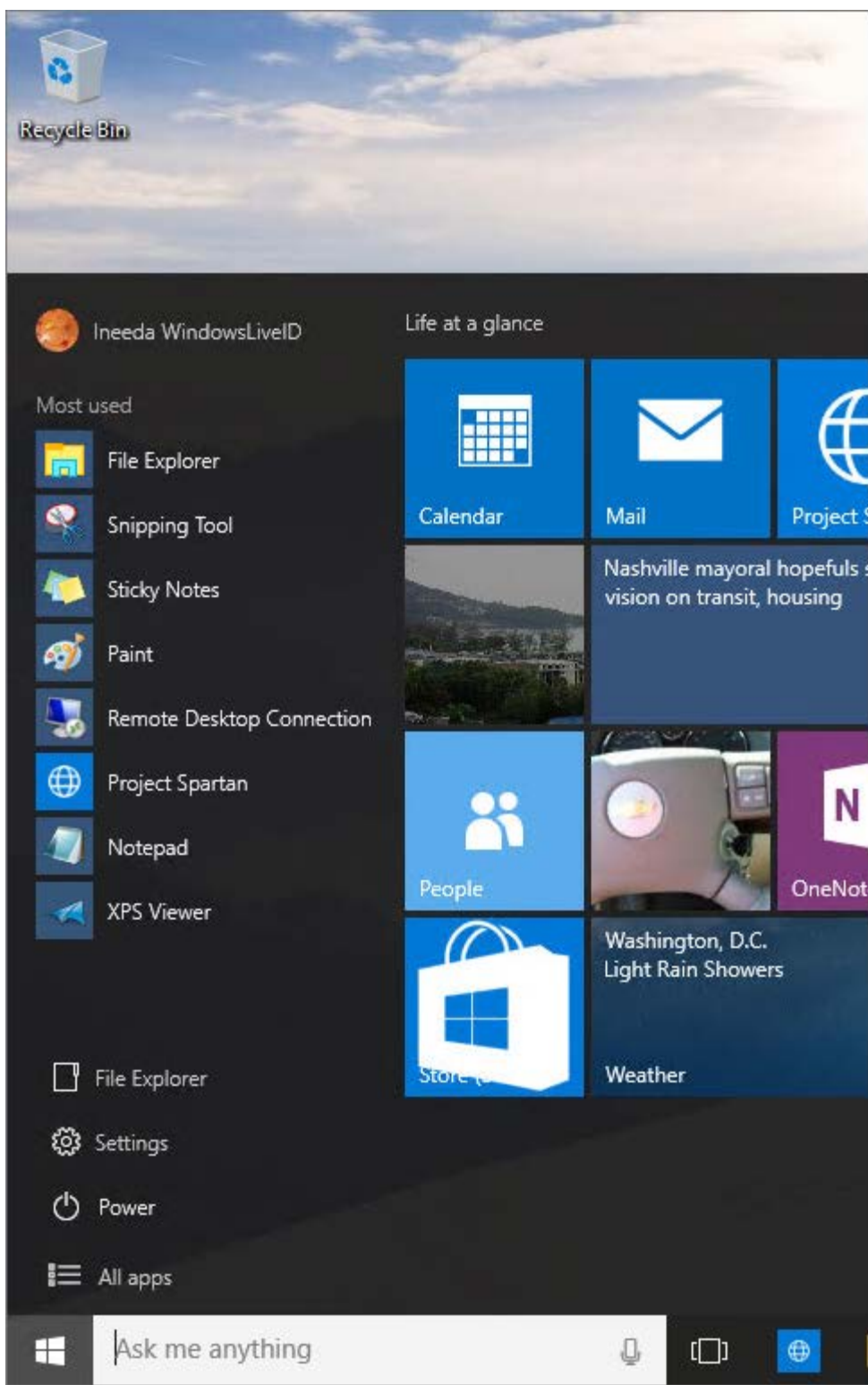
Figure 1. Build 10122's start menu has key options such as File Explorer, Settings, Power, and All apps grouped together.

Yes, some people have kvetched about build 10122's new start menu — I agree that the Power button is too easy to accidentally click, and Start doesn't include the customization tricks we know from Win7. For example, you can't build a tree of nested folders. But for most of the stuff I do, the new layout generally works well. And I still like to think of the Universal Windows app tiles on the right as *useful* successors to Win7 gadgets.

I'm happy that the settings' Customization list window (Settings/Personalization/) appears to let you control whether recently opened or downloaded apps show up in Start — or it will sometime in the future; those options are grayed out in build 10122. Two features that *are* active are "Use full-screen Start when in the desktop" and "Store and display recently opened items in Start and the taskbar."

The "Use full-screen …" option can be a bit confusing at first. When switched on, clicking the Start icon displays only pinned Universal app tiles and a three-bar icon, which you click to display Start's left column.

Microsoft Edge — the future replacement for Internet Explorer — is finally starting to flesh itself out a bit. Surprisingly quick, it replaces both the Universal Windows Reader app and the Universal Reading List app, taking over all Windows PDF–reading responsibilities.

Edge definitely isn't Internet Explorer. ActiveX controls, Silverlight, custom toolbars, and those crappy browser-helper objects simply don't exist anymore. Turning Flash on or off is as easy as flipping a setting. Edge is supposed to support extensions at some point, but we might not see them until Win10 hits RTM.

The latest Edge build adds features you'd expect in any modern browser — for example, private browsing and right-clicking to reopen a closed tab. You can drag tabs around or pin a website to the start menu. If you have several active tabs and one of them starts playing audio, a telltale icon appears on the tab. In other words, Microsoft's browser is slowly catching up to Chrome and Firefox — at least in some respects.

That said, some of Edge's tools are still relatively clunky. The Hub icon, for example, gives extremely basic management tools for favorites, bookmarks (Reading list), history, and downloads. Many expected features are still MIA, including file drag-and-drop, the ability to set a group of tabs as "home," and so on. Microsoft obviously has much to do before Edge is ready for all Windows users.

The browser has some unfortunate "features." For example a new tab shows, by default, a list of sites chosen according to criteria that completely escape me — plus a spot for a big ad at the bottom (see Figure 2). I wonder how long it'll take Microsoft to sell that real estate — just as Firefox might start doing with its suggested tiles, according to a TechCrunch
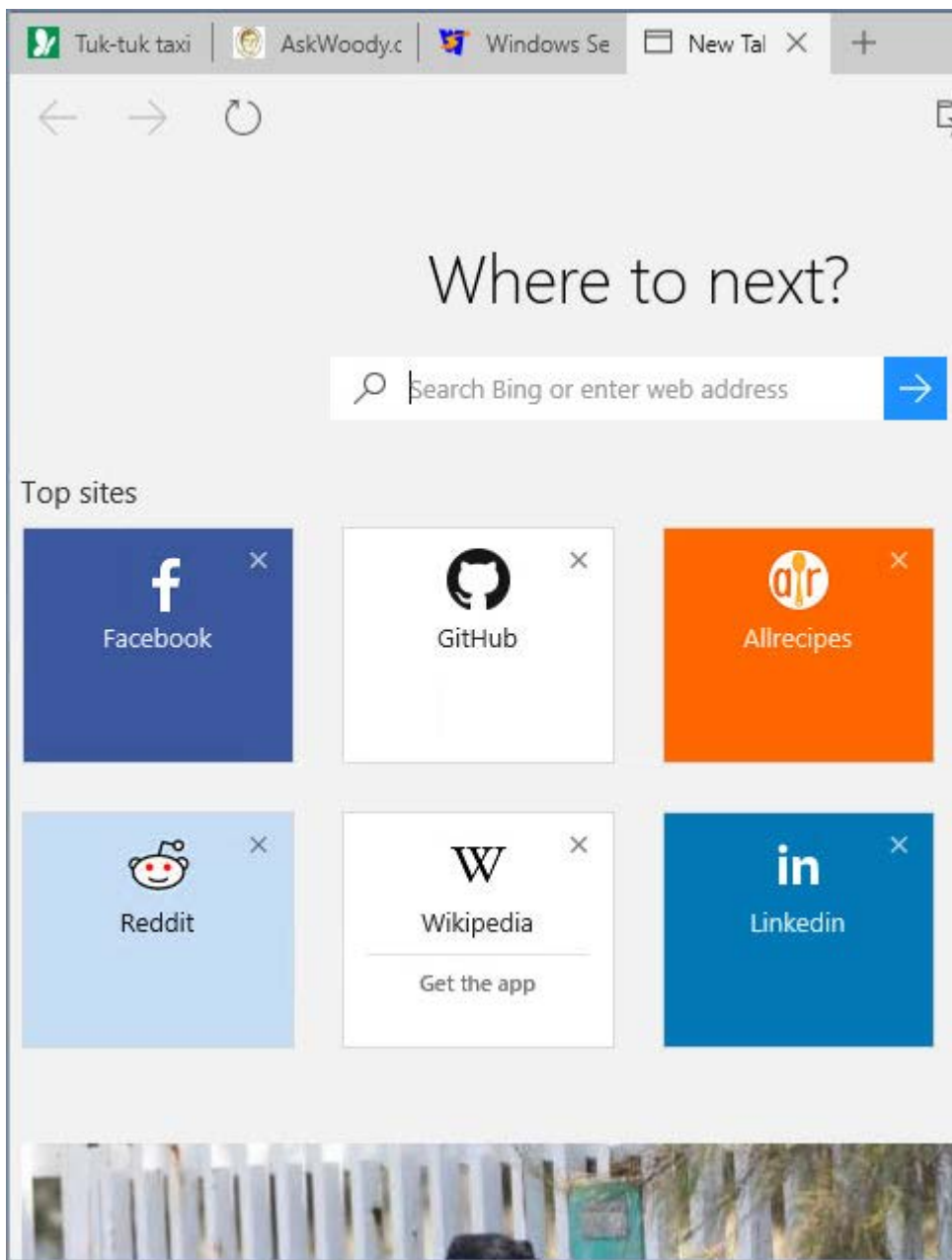
Figure 2. Edge's new-tab page oozes with opportunities to sell you something.

There are lots of other browser-UI tweaks still to come. Cortana support, for instance, is barely bolted on at this point. How that will play out is still unknown.

System backup has taken a bit of a U-turn. With Windows 8, Microsoft tossed Win7's familiar backup-and-restore scheme to the wolves — or at least the ability to easily restore Win7 backups. The details are still sketchy, but build 10122's **Backup** window includes an option to "Restore files you backed up using the Windows 7 Backup and Restore tool." There appear to be hooks into all the old backup-and-restore routines, including system image, system repair disk, and incremental backups — even to network locations.

It's hard to say how much of this will actually work, but at the very least Microsoft seems committed to the ability to restore Win7 backups on Win10 machines. To check it out for yourself, click Start/Settings/Update & security/Backup; under "Restore files from Windows 7," click the "Go to Backup and Restore (Windows 7)" link.
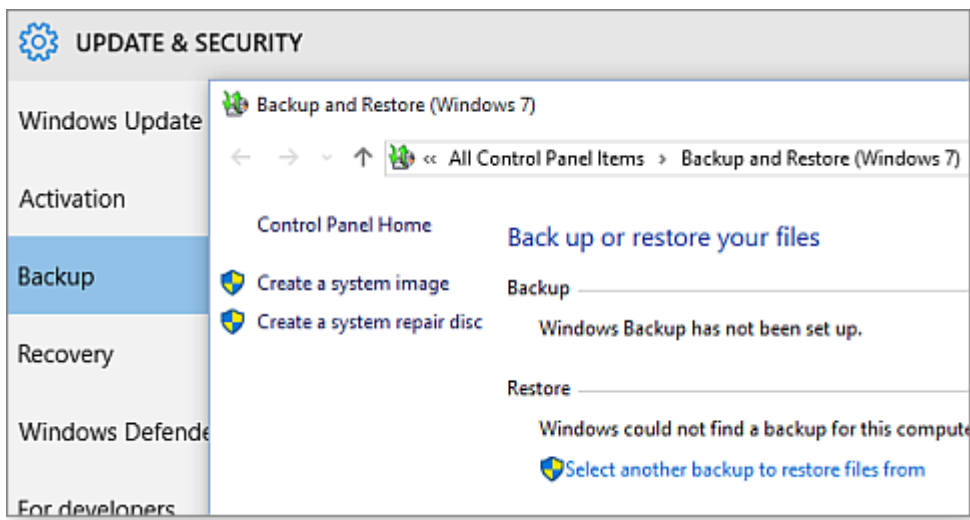
Figure 3. Win10 build 10122 unexpectedly includes the backup-and-restore tool familiar to Win7 users.

It also appears that File Explorer's Win7-style, right-click option "Restore previous versions" is making a comeback. It gives you File History's automatic backup functionality without having to launch a separate applet — a welcome change.

New in build 10122, the **Mail app** now supports two-factor authentication in Outlook.com. The **Calendar app** still hooks into my Google Calendar, slick as can be. The **Photos app** is behaving itself a little better than in previous builds, but it's still riddled with bugs — particularly when constructing Albums. There are new **Music** and **Video** apps, each obviously designed to get you to spend money. Neither comes close to VideoLAN's (**site**) ability to play all kinds of media formats.

Creating a better touch-and-swipe experience

On a tablet — or on a convertible device in tablet mode — you'll find that build 10122 is far more finger-friendly than were the earlier builds. For example, in tablet mode, pressing the Start button pops up the Windows apps tiles but leaves the less-finger-friendly, left-hand start-menu list hidden (see Figure 4). To reveal it, you simply tap the hamburger (three-bar) icon.

Figure 4. Tablet Mode puts back the emphasis on touch-and-swipe navigation.

Other changes include enlarged icons and uniform pull-down window titles with **X** stop icons. Unfortunately, no matter what you do, the taskbar at the bottom isn't going completely away. You can auto-hide the taskbar, but it'll still appear when you're at the Start screen. (It'll also pop up with a swipe from the bottom or if you hover the mouse pointer.)

Far from perfect, but getting close to "done"

I'm convinced that Microsoft is going to make the expected (leaked) end-of-July release to manufacturing (aka RTM) date — even with all the lapses and frustrations with build 10122. Win10 appears to be nearly feature-complete, and it's fairly stable. (Drivers are a thorny issue for all new operating systems.)

But that release date needs a bit of clarification. "RTM" doesn't have much meaning, now that Microsoft doesn't burn DVDs and stick them into boxes. With Win7, 8, and 8.1, there was a significant time gap between RTM and *general availability* — time enough for Microsoft to fix the really bad problems after the software "shipped," but before it was widely available. As with Office 2013, expect to see a slew of bug-swatting updates immediately after RTM is signed off on.

Or maybe before RTM. Microsoft has stated that it'll send out Win10 updates as soon as they're available. Unfortunately, the whole Win10 updating process is still largely unknown to all but Microsoft. But it's highly likely that July's Win10 will have changed substantially by the end of the year — and again a year from now.

There are still many other unknowns. We know that "genuine" Win7 and Win8.1 machines will be offered a free upgrade to Win10 during the first year. In his May 20 ZDNet **post**, Ed Bott has a good overview of what is and isn't known about upgrades. Upgraded machines will continue to get free updates for the rest of their natural lives. (Don't believe any article you might have read stating that you'll have to pay for updates — those reports are just plain wrong.)

Again, we don't have a clue about how Microsoft will send out Win10 patches. It's possible that it will force-feed updates to "free" Windows customers. But there might also be some leeway, along the lines of Windows Update for Business. Mary Jo Foley fills in some details in her May 14 ZDNet **post** on Windows-as-a-service. Paul Thurrott adds a different perspective in his aptly titled blog, "Windows as a service requires more trust than Microsoft may deserve." If you're curious about Windows 10 updating, both of those columns are must-reads.

Personally, I detest the phrase "Windows as a service" because the OS isn't going to be anything close to the traditional definition of "software as a service." Microsoft is redefining the phrase to suit its marketing purposes — and that's confused the living bejesus out of everybody.

Here's my litmus-test question: Will people with "free" Windows 10 Pro be able to control when they receive patches? Once we get a definitive answer to that question, lots of pieces will fall into place.

The other day, my wife asked me whether Win10 will be the *last* version of Windows. I choked on my coffee and took a minute to let my blood pressure go back to normal. If you encounter someone who asks that question — which has been so widely touted in the mainstream press — you can assure them that Windows will go on for a very long time — decades.

Whether future versions of Windows will be called Windows 2020 or Windows 10.3.14.159 is meaningless because the names are just marketing. Whether Windows will continue to improve and remain the overwhelmingly dominant desktop and business OS will be another story.

Think of Windows 10 RTM as the "first final" build of Windows 10. There's much more to come.

Weekly Download Section

from Jim McGorry

YOUBEAM - WEB VIDEO STREAMING IN THE PALM OF YOUR HAND

Big things come in little packages with *YouBeam*, a handy, free web browser device that connects to televisions and connects to the web providing exclusive paid service ($7.99 a month) through a

unique video search engine/browser. This 9-ounce wonder acts like a media center and works to get people to cut their cable service and instead stream content from the Web to their televisions. **You Beam** has a handy handheld size, simple hardware setup, and blocks viruses, adware, spyware and those annoying pop-up ads.

The new **YouBeam** gadget puts the power of movies, sports, TV shows, international TV channels, and other video content directly in the palm of your hand at up to 1080p HD from the Web to multiple TVs in a home. YouBeam searches and locates free movies and TV shows on the Web – and strips all viruses, malware, etc. from them. Minimum Requirements: Windows 7 or 8, Internet Connection with at least 1 mb/sec download, TV with HDMI input, Wifi.

The surprisingly small package includes the main piece (Inateck BTSP-10), a micro USB changing cable, a 3.5 mm audio cable, user manual, and handy carrying bag.

The YouBeam hardware piece contains a male HDMI port (with cover) to plug into your TV (HDMI female) and uses the micro USB port (connected on the opposite side of HDMI port) for power.

1. Plug it in
   HDMI
   USB Power
   TV
   or
   Power Adapter
   (Recommended)

2. Select HDMI Input
   TV
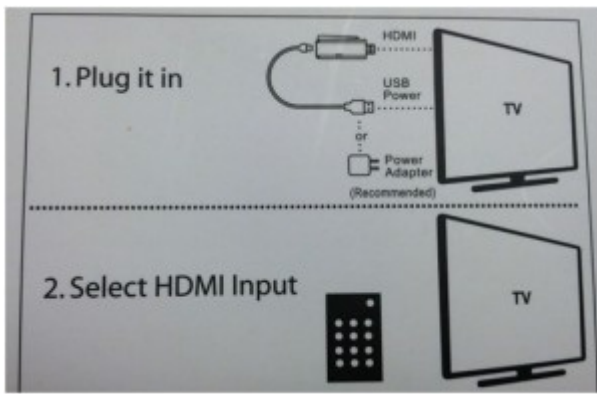
The **YouBeam hardware installation** is fairly simple, but the software setup is more involved. The device's exclusive web browser navigates users to available content plus claims and succeeds to block and prevent any virus, adware, or spyware.

Users must first register at **http://www.youbeam.tv** and download the YouBeam app before using YouBeam. User can also disable the parental controls with a user name and password. There is a $7.99 monthly fee. Full users can "beam" favorite videos to the TV using the YouBeam device that connects to your TV through HDMI. Users also encounter a unique rating system in the browser where users can rate the quality of videos they watch, and these ratings are used to improve future search results for everyone. The company will also offer you the opportunity to sell YouBeam to your friends and we're in no way endorsing that.

YouBeam retails for $14.99 plus an upcoming android app that will allow you to beam videos and control the player from your phone.